REMARKS/ARGUMENTS

Claims 1-34 are pending upon entry of this amendment. Claims 14-34 are withdrawn.

The abstract of the disclosure is objected to because it exceeds 150 words.

Claims 1-13 stand rejected under 35 U.S.C. § 102 as being anticipated by US 2003/0008411 to Van Dam et al. ("Van Dam").

Reconsideration of the rejection in view of the following remarks is respectfully requested.

Specification

The abstract has been amended to not exceed 150 words. Thus, Applicants respectfully request that the Examiner remove the pending objection to the abstract.

Claim Rejections - 35 U.S.C. § 102

Claim 1 recites "a plurality of first flow channels" and "a plurality of second flow channels, each such second flow channel intersecting multiple of the first flow channels to define intersecting volumes and a plurality of looped flow channels that each include segments of the flow channels between the intersecting volumes to define a closed loop," among other elements. Applicants respectfully submit that the cited reference does not teach or suggest at least these elements in the manner claimed.

Van Dam discusses a linear or serpentine arrangement of flow channels that provide for a single-pass flow of reagents during the combinatorial synthesis of DNA N-mers. Van Dam discusses a method in which a set of reagents are sequentially flowed in a first direction (e.g., Step 1: Nucleic acids A/C/G/T sequentially flowing in the X-direction, Van Dam at paragraphs [0159] - [0165]). After this first step, "all 16 X-direction channels have been exposed to coupling regents only once, i.e., the first base has been added to all 'rows' of the array." (Van Dam at paragraph [0164]). Then, the set of reagents are sequentially flowed in a second direction (e.g., Step 2: Nucleic acids A/C/G/T sequentially flowing in the Y-direction, Van Dam at paragraphs [0166] - [0173]). These two steps are repeated once in order to add all four bases to the compounds on the array. Thus, Van Dam, as illustrated in FIG. 12A, discusses

a method in which the reagents enter at the injection sites (Inject-X or Inject-Y) on one side of the microfluidic device and exit at the waste sites (Waste-X or Waste-Y) on the opposite side of the microfluidic device.

Thus, Van Dam only describes single-pass flow channels suitable for combinatorial synthesis. Therefore, Van Dam does not teach or suggest "a plurality of looped flow channels that each include segments of the flow channels between the intersecting volumes to define a closed loop," as recited by claim 1.

Although, at paragraph [0190], Van Dam discusses a "serpentine" arrangement of flow channels in which the flow from selected channels is redirected back into other channels flowing in the reverse direction, there is no teaching of suggestion of a closed loop. For at least these reasons, claim 1 is in condition for allowance.

Claims 2-13, which depend from claim 1, are in condition for allowance, for at least the reasons discussed in relation to claim 1, as well as for the additional elements they recite.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

/Craig C. Largent/

Craig C. Largent
Reg. No. 56,400

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400 Fax: 415-576-0300
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